MAR 15 2002
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#9

Sequence Listing

<110> Chen, Jian
Filvaroff, Ellen
Fong, Sherman
Goddard, Audrey
Godowski, Paul L.
Grimaldi, J.Christopher
Gurney, Austin
Li, Hanzhong
Hillan, Kenneth J.
Hymowitz, Sarah
Tumas, Daniel
Starovasnik, Melissa.
VanLookeren, Menno
Vandlen, Richard
Watanabe, Colin
Williams, P.Mickey
Wood, William
Yansura, Daniel

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35 40 45

Pro Leu Asp Leu Val Ser Arg Met Lys Pro Tyr Ala Arg Met Glu
50 55 60

Glu Tyr Glu Arg Asn Ile Glu Glu Met Val Ala Gln Leu Arg Asn
65 70 75

Ser Ser Glu Leu Ala Gln Arg Lys Cys Glu Val Asn Leu Gln Leu
80 85 90

Trp Met Ser Asn Lys Arg Ser Leu Ser Pro Trp Gly Tyr Ser Ile
95 100 105

Asn His Asp Pro Ser Arg Ile Pro Val Asp Leu Pro Glu Ala Arg
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Cys Leu Cys Leu Gly Cys Val Asn Pro Phe Thr Met Gln Glu Asp
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Arg Ser Met Val Ser Val Pro Val Phe Ser Gln Val Pro Val Arg
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| His | Gly | Thr | Pro | His | Cys | Tyr | Ser | Ala | Glu | Glu | Leu | Pro | Leu | Gly | |
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| Gln | Ala | Pro | Pro | His | Leu | Leu | Ala | Arg | Gly | Ala | Lys | Trp | Gly | Gln | |
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| Arg | Gly | Arg | His | Glu | Arg | Pro | Ser | Ala | Thr | Thr | Gln | Cys | Pro | Val | |
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| Leu | Arg | Pro | Glu | Glu | Val | Leu | Glu | Ala | Asp | Thr | His | Gln | Arg | Ser | |
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| | | | 170 | | | | | 175 | | | | | | | 180 |
| Glu | Phe | Ile | His | Val | Pro | Val | Gly | Cys | Thr | Cys | Val | Leu | Pro | Arg | |
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Asp Thr Ser Glu Glu Leu Leu Arg Trp Ser Thr Val Pro Val Pro
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Pro Leu Glu Pro Ala Arg Pro Asn Arg His Pro Glu Ser Cys Arg
65 70 75

Ala Ser Glu Asp Gly Pro Leu Asn Ser Arg Ala Ile Ser Pro Trp
80 85 90

Arg Tyr Glu Leu Asp Arg Asp Leu Asn Arg Leu Pro Gln Asp Leu
95 100 105

Tyr His Ala Arg Cys Leu Cys Pro His Cys Val Ser Leu Gln Thr
110 115 120

Gly Ser His Met Asp Pro Arg Gly Asn Ser Glu Leu Leu Tyr His
125 130 135

Asn Gln Thr Val Phe Tyr Arg Arg Pro Cys His Gly Glu Lys Gly
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35 40 45

Leu Ala Ala Gly Val Leu Ser Ala Phe His His Thr Leu Gln Leu
50 55 60

Gly Pro Arg Glu Gln Ala Arg Asn Ala Ser Cys Pro Ala Gly Gly
65 70 75

Arg Pro Gly Asp Arg Arg Phe Arg Pro Pro Thr Asn Leu Arg Ser
80 85 90

Val Ser Pro Trp Ala Tyr Arg Ile Ser Tyr Asp Pro Ala Arg Tyr
95 100 105

Pro Arg Tyr Leu Pro Glu Ala Tyr Cys Leu Cys Arg Gly Cys Leu
110 115 120

Thr Gly Leu Phe Gly Glu Glu Asp Val Arg Phe Arg Ser Ala Pro
125 130 135

Val Tyr Met Pro Thr Val Val Leu Arg Arg Thr Pro Ala Cys Ala
140 145 150

Gly Gly Arg Ser Val Tyr Thr Glu Ala Tyr Val Thr Ile Pro Val
155 160 165

Gly Cys Thr Cys Val Pro Glu Pro Glu Lys Asp Ala Asp Ser Ile
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35 40 45

Ser Cys Pro Pro Val Pro Gly Gly Ser Met Lys Leu Asp Ile Gly
50 55 60

Ile Ile Asn Glu Asn Gln Arg Val Ser Met Ser Arg Asn Ile Glu
65 70 75

Ser Arg Ser Thr Ser Pro Trp Asn Tyr Thr Val Thr Trp Asp Pro
80 85 90

Asn Arg Tyr Pro Ser Glu Val Val Gln Ala Gln Cys Arg Asn Leu
95 100 105

Gly Cys Ile Asn Ala Gln Gly Lys Glu Asp Ile Ser Met Asn Ser
110 115 120

Val Pro Ile Gln Gln Glu Thr Leu Val Val Arg Arg Lys His Gln
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| | | | | 20 | | | | 25 | | | | | | | 30 |
| Ser | Pro | Glu | Trp | Met | Leu | Gln | His | Asp | Leu | Ile | Pro | Gly | Asp | Leu | |
| | | | | 35 | | | | 40 | | | | | | | 45 |
| Arg | Asp | Leu | Arg | Val | Glu | Pro | Val | Thr | Thr | Ser | Val | Ala | Thr | Gly | |
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| Ala | Ser | Ile | Arg | Leu | Leu | Lys | Ala | Thr | Lys | Ile | Cys | Val | Thr | Gly | |
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| Lys | Ser | Asn | Phe | Gln | Ser | Tyr | Ser | Cys | Val | Arg | Cys | Asn | Tyr | Thr | |
| | | | | 95 | | | | 100 | | | | | | | 105 |
| Glu | Ala | Phe | Gln | Thr | Gln | Thr | Arg | Pro | Ser | Gly | Gly | Lys | Trp | Thr | |
| | | | | 110 | | | | 115 | | | | | | | 120 |
| Phe | Ser | Tyr | Ile | Gly | Phe | Pro | Val | Glu | Leu | Asn | Thr | Val | Tyr | Phe | |
| | | | | 125 | | | | 130 | | | | | | | 135 |
| Ile | Gly | Ala | His | Asn | Ile | Pro | Asn | Ala | Asn | Met | Asn | Glu | Asp | Gly | |
| | | | | 140 | | | | 145 | | | | | | | 150 |
| Pro | Ser | Met | Ser | Val | Asn | Phe | Thr | Ser | Pro | Gly | Cys | Leu | Asp | His | |
| | | | | 155 | | | | 160 | | | | | | | 165 |
| Ile | Met | Lys | Tyr | Lys | Lys | Lys | Cys | Val | Lys | Ala | Gly | Ser | Leu | Trp | |
| | | | | 170 | | | | 175 | | | | | | | 180 |
| Asp | Pro | Asn | Ile | Thr | Ala | Cys | Lys | Lys | Asn | Glu | Glu | Thr | Val | Glu | |
| | | | | 185 | | | | 190 | | | | | | | 195 |
| Val | Asn | Phe | Thr | Thr | Thr | Pro | Leu | Gly | Asn | Arg | Tyr | Met | Ala | Leu | |
| | | | | 200 | | | | 205 | | | | | | | 210 |
| Ile | Gln | His | Ser | Thr | Ile | Ile | Gly | Phe | Ser | Gln | Val | Phe | Glu | Pro | |
| | | | | 215 | | | | 220 | | | | | | | 225 |

His Gln Lys Lys Gln Thr Arg Ala Ser Val Val Ile Pro Val Thr
230 235 240

Gly Asp Ser Glu Gly Ala Thr Val Gln Leu Thr Pro Tyr Phe Pro
245 250 255

Thr Cys Gly Ser Asp Cys Ile Arg His Lys Gly Thr Val Val Leu
260 265 270

Cys Pro Gln Thr Gly Val Pro Phe Pro Leu Asp Asn Asn Lys Ser
275 280 285

Lys Pro Gly Gly Trp Leu Pro Leu Leu Leu Leu Ser Leu Leu Val
290 295 300

Ala Thr Trp Val Leu Val Ala Gly Ile Tyr Leu Met Trp Arg His
305 310 315

Glu Arg Ile Lys Lys Thr Ser Phe Ser Thr Thr Thr Leu Leu Pro
320 325 330

Pro Ile Lys Val Leu Val Val Tyr Pro Ser Glu Ile Cys Phe His
335 340 345

His Thr Ile Cys Tyr Phe Thr Glu Phe Leu Gln Asn His Cys Arg
350 355 360

Ser Glu Val Ile Leu Glu Lys Trp Gln Lys Lys Lys Ile Ala Glu
365 370 375

Met Gly Pro Val Gln Trp Leu Ala Thr Gln Lys Lys Ala Ala Asp
380 385 390

Lys Val Val Phe Leu Leu Ser Asn Asp Val Asn Ser Val Cys Asp
395 400 405

Gly Thr Cys Gly Lys Ser Glu Gly Ser Pro Ser Glu Asn Ser Gln
410 415 420

Asp Leu Phe Pro Leu Ala Phe Asn Leu Phe Cys Ser Asp Leu Arg
425 430 435

Ser Gln Ile His Leu His Lys Tyr Val Val Val Tyr Phe Arg Glu
440 445 450

Ile Asp Thr Lys Asp Asp Tyr Asn Ala Leu Ser Val Cys Pro Lys
455 460 465

Tyr His Leu Met Lys Asp Ala Thr Ala Phe Cys Ala Glu Leu Leu
470 475 480

His Val Lys Gln Gln Val Ser Ala Gly Lys Arg Ser Gln Ala Cys
485 490 495

His Asp Gly Cys Cys Ser Leu
500

<210> 13

<211> 2380
<212> DNA
<213> Homo Sapien

<400> 13
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gtcaggactc ccaggacaga gagtgcacaa actacccagc acagcccccc 100

ccgccccctc tggaggctga agagggattc cagcccctgc cacccacaga 150

cacgggctga ctggggtgtc tgccccccct ggggggggggc agcacagggc 200

ctcaggcctg ggtgccacct ggcacctaga agatgcctgt gccctggttc 250

ttgctgtcct tggcactggg ccgaagccca gtggtccttt ctctggagag 300

gcttgtgggg cctcaggacg ctacccactg ctctccgggc ctctcctgcc 350

gcctctggga cagtgacata ctctgcctgc ctggggacat cgtgcctgct 400

ccgggccccg tgctggcgcc tacgcacctg cagacagagc tggtgctgag 450

gtgccagaag gagaccgact gtgacctctg tctgcgtgtg gctgtccact 500

tggccgtgca tgggcactgg gaagagcctg aagatgagga aaagtttgga 550

ggagcagctg actcaggggt ggaggagcct aggaatgcct ctctccaggc 600

ccaagtcgtg ctctccttcc aggcctaccc tactgcccgc tgcgtcctgc 650

tggaggtgca agtgcctgct gcccttgtgc agtttggtca gtctgtgggc 700

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catctggttc tgaatgtctc tgaggagcag cacttcggcc tctccctgta 900

ctggaatcag gtccagggcc ccccaaaacc ccggtggcac aaaaacctga 950

ctggaccgca gatcattacc ttgaaccaca cagacctggt tccctgcctc 1000

tgtattcagg tgtggcctct ggaacctgac tccgttagga cgaacatctg 1050

ccccttcagg gaggaccccc gcgcacacca gaacctctgg caagccgccc 1100

gactgcgact gctgaccctg cagagctggc tgctggacgc accgtgctcg 1150

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ccgcgttccg ggcggctcca agagagagcg gagcaagtgt cccgggccct 2250

tcagccagcc ctggatagct acttccatcc cccggggact cccgcgccgg 2300

gacgcggggt gggaccaggg gcgggacctg gggcggggga cgggacttaa 2350

ataaaggcag acgctgtttt tctaaaaaaa 2380

<210> 14
<211> 705
<212> PRT
<213> Homo Sapien

<400> 14
Met Pro Val Pro Trp Phe Leu Leu Ser Leu Ala Leu Gly Arg Ser
1 5 10 15

Pro Val Val Leu Ser Leu Glu Arg Leu Val Gly Pro Gln Asp Ala
20 25 30

Thr His Cys Ser Pro Gly Leu Ser Cys Arg Leu Trp Asp Ser Asp
35 40 45

Ile Leu Cys Leu Pro Gly Asp Ile Val Pro Ala Pro Gly Pro Val

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                50                  55                  60

Leu Ala Pro Thr His Leu Gln Thr Glu Leu Val Leu Arg Cys Gln
                65                  70                  75

Lys Glu Thr Asp Cys Asp Leu Cys Leu Arg Val Ala Val His Leu
                80                  85                  90

Ala Val His Gly His Trp Glu Glu Pro Glu Asp Glu Glu Lys Phe
                95                 100                 105

Gly Gly Ala Ala Asp Ser Gly Val Glu Glu Pro Arg Asn Ala Ser
               110                 115                 120

Leu Gln Ala Gln Val Val Leu Ser Phe Gln Ala Tyr Pro Thr Ala
               125                 130                 135

Arg Cys Val Leu Leu Glu Val Gln Val Pro Ala Ala Leu Val Gln
               140                 145                 150

Phe Gly Gln Ser Val Gly Ser Val Val Tyr Asp Cys Phe Glu Ala
               155                 160                 165

Ala Leu Gly Ser Glu Val Arg Ile Trp Ser Tyr Thr Gln Pro Arg
               170                 175                 180

Tyr Glu Lys Glu Leu Asn His Thr Gln Gln Leu Pro Ala Leu Pro
               185                 190                 195

Trp Leu Asn Val Ser Ala Asp Gly Asp Asn Val His Leu Val Leu
               200                 205                 210

Asn Val Ser Glu Glu Gln His Phe Gly Leu Ser Leu Tyr Trp Asn
               215                 220                 225

Gln Val Gln Gly Pro Pro Lys Pro Arg Trp His Lys Asn Leu Thr
               230                 235                 240

Gly Pro Gln Ile Ile Thr Leu Asn His Thr Asp Leu Val Pro Cys
               245                 250                 255

Leu Cys Ile Gln Val Trp Pro Leu Glu Pro Asp Ser Val Arg Thr
               260                 265                 270

Asn Ile Cys Pro Phe Arg Glu Asp Pro Arg Ala His Gln Asn Leu
               275                 280                 285

Trp Gln Ala Ala Arg Leu Arg Leu Leu Thr Leu Gln Ser Trp Leu
               290                 295                 300

Leu Asp Ala Pro Cys Ser Leu Pro Ala Glu Ala Ala Leu Cys Trp
               305                 310                 315

Arg Ala Pro Gly Gly Asp Pro Cys Gln Pro Leu Val Pro Pro Leu
               320                 325                 330

Ser Trp Glu Asn Val Thr Val Asp Lys Val Leu Glu Phe Pro Leu
               335                 340                 345
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Leu Lys Gly His Pro Asn Leu Cys Val Gln Val Asn Ser Ser Glu
350 355 360

Lys Leu Gln Leu Gln Glu Cys Leu Trp Ala Asp Ser Leu Gly Pro
365 370 375

Leu Lys Asp Asp Val Leu Leu Leu Glu Thr Arg Gly Pro Gln Asp
380 385 390

Asn Arg Ser Leu Cys Ala Leu Glu Pro Ser Gly Cys Thr Ser Leu
395 400 405

Pro Ser Lys Ala Ser Thr Arg Ala Ala Arg Leu Gly Glu Tyr Leu
410 415 420

Leu Gln Asp Leu Gln Ser Gly Gln Cys Leu Gln Leu Trp Asp Asp
425 430 435

Asp Leu Gly Ala Leu Trp Ala Cys Pro Met Asp Lys Tyr Ile His
440 445 450

Lys Arg Trp Ala Leu Val Trp Leu Ala Cys Leu Leu Phe Ala Ala
455 460 465

Ala Leu Ser Leu Ile Leu Leu Leu Lys Lys Asp His Ala Lys Gly
470 475 480

Trp Leu Arg Leu Leu Lys Gln Asp Val Arg Ser Gly Ala Ala Ala
485 490 495

Arg Gly Arg Ala Ala Leu Leu Leu Tyr Ser Ala Asp Asp Ser Gly
500 505 510

Phe Glu Arg Leu Val Gly Ala Leu Ala Ser Ala Leu Cys Gln Leu
515 520 525

Pro Leu Arg Val Ala Val Asp Leu Trp Ser Arg Arg Glu Leu Ser
530 535 540

Ala Gln Gly Pro Val Ala Trp Phe His Ala Gln Arg Arg Gln Thr
545 550 555

Leu Gln Glu Gly Gly Val Val Val Leu Leu Phe Ser Pro Gly Ala
560 565 570

Val Ala Leu Cys Ser Glu Trp Leu Gln Asp Gly Val Ser Gly Pro
575 580 585

Gly Ala His Gly Pro His Asp Ala Phe Arg Ala Ser Leu Ser Cys
590 595 600

Val Leu Pro Asp Phe Leu Gln Gly Arg Ala Pro Gly Ser Tyr Val
605 610 615

Gly Ala Cys Phe Asp Arg Leu Leu His Pro Asp Ala Val Pro Ala
620 625 630

Leu Phe Arg Thr Val Pro Val Phe Thr Leu Pro Ser Gln Leu Pro

635 640 645

Asp Phe Leu Gly Ala Leu Gln Gln Pro Arg Ala Pro Arg Ser Gly
650 655 660

Arg Leu Gln Glu Arg Ala Glu Gln Val Ser Arg Ala Leu Gln Pro
665 670 675

Ala Leu Asp Ser Tyr Phe His Pro Pro Gly Thr Pro Ala Pro Gly
680 685 690

Arg Gly Val Gly Pro Gly Ala Gly Pro Gly Ala Gly Asp Gly Thr
695 700 705

<210> 15
<211> 2138
<212> DNA
<213> Homo Sapien

<400> 15
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atagtcatcg acctctctga ctctgctggg attggctttc gccacctgcc 200

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cgcgggagca gggcactgtg ctgctgctgt ggagcggcgc cgaccttcgc 1800

ccggtcagcg gccccgaccc ccgcgccgcg cccctgctcg ccctgctcca 1850

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gcctagagct gtgcagccgg cttgaacgag aggccgcccg acttgcagac 2100

ctaggttgag cagagctcca ccgcagtccc gggtgtct 2138

<210> 16
<211> 667
<212> PRT
<213> Homo Sapien

<400> 16

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Met | Gly | Ser | Ser | Arg | Leu | Ala | Ala | Leu | Leu | Leu | Pro | Leu | Leu | Leu | |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | |

Ile Val Ile Asp Leu Ser Asp Ser Ala Gly Ile Gly Phe Arg His

20 25 30

Leu Pro His Trp Asn Thr Arg Cys Pro Leu Ala Ser His Thr Asp
35 40 45

Asp Ser Phe Thr Gly Ser Ser Ala Tyr Ile Pro Cys Arg Thr Trp
50 55 60

Trp Ala Leu Phe Ser Thr Lys Pro Trp Cys Val Arg Val Trp His
65 70 75

Cys Ser Arg Cys Leu Cys Gln His Leu Leu Ser Gly Gly Ser Gly
80 85 90

Leu Gln Arg Gly Leu Phe His Leu Leu Val Gln Lys Ser Lys Lys
95 100 105

Ser Ser Thr Phe Lys Phe Tyr Arg Arg His Lys Met Pro Ala Pro
110 115 120

Ala Gln Arg Lys Leu Leu Pro Arg Arg His Leu Ser Glu Lys Ser
125 130 135

His His Ile Ser Ile Pro Ser Pro Asp Ile Ser His Lys Gly Leu
140 145 150

Arg Ser Lys Arg Thr Gln Pro Ser Asp Pro Glu Thr Trp Glu Ser
155 160 165

Leu Pro Arg Leu Asp Ser Gln Arg His Gly Gly Pro Glu Phe Ser
170 175 180

Phe Asp Leu Leu Pro Glu Ala Arg Ala Ile Arg Val Thr Ile Ser
185 190 195

Ser Gly Pro Glu Val Ser Val Arg Leu Cys His Gln Trp Ala Leu
200 205 210

Glu Cys Glu Glu Leu Ser Ser Pro Tyr Asp Val Gln Lys Ile Val
215 220 225

Ser Gly Gly His Thr Val Glu Leu Pro Tyr Glu Phe Leu Leu Pro
230 235 240

Cys Leu Cys Ile Glu Ala Ser Tyr Leu Gln Glu Asp Thr Val Arg
245 250 255

Arg Lys Lys Cys Pro Phe Gln Ser Trp Pro Glu Ala Tyr Gly Ser
260 265 270

Asp Phe Trp Lys Ser Val His Phe Thr Asp Tyr Ser Gln His Thr
275 280 285

Gln Met Val Met Ala Leu Thr Leu Arg Cys Pro Leu Lys Leu Glu
290 295 300

Ala Ala Leu Cys Gln Arg His Asp Trp His Thr Leu Cys Lys Asp
305 310 315

Leu Pro Asn Ala Thr Ala Arg Glu Ser Asp Gly Trp Tyr Val Leu
320 325 330

Glu Lys Val Asp Leu His Pro Gln Leu Cys Phe Lys Phe Ser Phe
335 340 345

Gly Asn Ser Ser His Val Glu Cys Pro His Gln Thr Gly Ser Leu
350 355 360

Thr Ser Trp Asn Val Ser Met Asp Thr Gln Ala Gln Gln Leu Ile
365 370 375

Leu His Phe Ser Ser Arg Met His Ala Thr Phe Ser Ala Ala Trp
380 385 390

Ser Leu Pro Gly Leu Gly Gln Asp Thr Leu Val Pro Pro Val Tyr
395 400 405

Thr Val Ser Gln Ala Arg Gly Ser Ser Pro Val Ser Leu Asp Leu
410 415 420

Ile Ile Pro Phe Leu Arg Pro Gly Cys Cys Val Leu Val Trp Arg
425 430 435

Ser Asp Val Gln Phe Ala Trp Lys His Leu Leu Cys Pro Asp Val
440 445 450

Ser Tyr Arg His Leu Gly Leu Leu Ile Leu Ala Leu Leu Ala Leu
455 460 465

Leu Thr Leu Leu Gly Val Val Leu Ala Leu Thr Cys Arg Arg Pro
470 475 480

Gln Ser Gly Pro Gly Pro Ala Arg Pro Val Leu Leu Leu His Ala
485 490 495

Ala Asp Ser Glu Ala Gln Arg Arg Leu Val Gly Ala Leu Ala Glu
500 505 510

Leu Leu Arg Ala Ala Leu Gly Gly Gly Arg Asp Val Ile Val Asp
515 520 525

Leu Trp Glu Gly Arg His Val Ala Arg Val Gly Pro Leu Pro Trp
530 535 540

Leu Trp Ala Ala Arg Thr Arg Val Ala Arg Glu Gln Gly Thr Val
545 550 555

Leu Leu Leu Trp Ser Gly Ala Asp Leu Arg Pro Val Ser Gly Pro
560 565 570

Asp Pro Arg Ala Ala Pro Leu Leu Ala Leu Leu His Ala Ala Pro
575 580 585

Arg Pro Leu Leu Leu Leu Ala Tyr Phe Ser Arg Leu Cys Ala Lys
590 595 600

Gly Asp Ile Pro Pro Pro Leu Arg Ala Leu Pro Arg Tyr Arg Leu

605 610 615

Leu Arg Asp Leu Pro Arg Leu Leu Arg Ala Leu Asp Ala Arg Pro
620 625 630

Phe Ala Glu Ala Thr Ser Trp Gly Arg Leu Gly Ala Arg Gln Arg
635 640 645

Arg Gln Ser Arg Leu Glu Leu Cys Ser Arg Leu Glu Arg Glu Ala
650 655 660

Ala Arg Leu Ala Asp Leu Gly
665

<210> 17
<211> 2319
<212> DNA
<213> Homo Sapien

<400> 17
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gggctgtaca acatcacctt caaatatgac aattgtacca cctacttgaa 200

tccagtgggg aagcatgtga ttgctgacgc ccagaatatc accatcagcc 250

agtatgcttg ccatgaccaa gtggcagtca ccattctttg gtccccaggg 300

gccctcggca tcgaattcct gaaaggattt cgggtaatac tggaggagct 350

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agctcaacag tagcttcaaa agaactggaa tggaatctca acctttcctg 450

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cattaaaaac gaaagcaatt accacccttt cttctttaga acccgagcct 550

gtgacctgtt gttacagccg gacaatctag cttgtaaacc cttctggaag 600

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cgcacaactt cggcttccgt ttcttctatc ttcactacaa gctcaagcac 750

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gaccagctgc ctccttcaaa atgtttctcc aggggattat ataattgagc 850

tggtggatga cactaacaca acaagaaaag tgatgcatta tgccttaaag 900

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gccgaaggtc tttctctgct attccagtaa agatggccag aatcacatga 1150

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cagatcttgg ttgccgcagc tacactgatg aactccacgc ggtcgcccct 2250

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aaaaaaaaaa aaaaaaaaa 2319

<210> 18
<211> 728

<212> PRT
<213> Homo Sapien

<400> 18

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Gly Glu Gln Gly Val Gly Pro Ala Ser Arg Asn Ser Gly Leu Tyr
            20                  25                  30

Asn Ile Thr Phe Lys Tyr Asp Asn Cys Thr Thr Tyr Leu Asn Pro
        35                  40                  45

Val Gly Lys His Val Ile Ala Asp Ala Gln Asn Ile Thr Ile Ser
    50                  55                  60

Gln Tyr Ala Cys His Asp Gln Val Ala Val Thr Ile Leu Trp Ser
65                  70                  75

Pro Gly Ala Leu Gly Ile Glu Phe Leu Lys Gly Phe Arg Val Ile
            80                  85                  90

Leu Glu Glu Leu Lys Ser Glu Gly Arg Gln Cys Gln Gln Leu Ile
        95                  100                 105

Leu Lys Asp Pro Lys Gln Leu Asn Ser Ser Phe Lys Arg Thr Gly
    110                 115                 120

Met Glu Ser Gln Pro Phe Leu Asn Met Lys Phe Glu Thr Asp Tyr
125                 130                 135

Phe Val Lys Val Val Pro Phe Pro Ser Ile Lys Asn Glu Ser Asn
            140                 145                 150

Tyr His Pro Phe Phe Phe Arg Thr Arg Ala Cys Asp Leu Leu Leu
        155                 160                 165

Gln Pro Asp Asn Leu Ala Cys Lys Pro Phe Trp Lys Pro Arg Asn
    170                 175                 180

Leu Asn Ile Ser Gln His Gly Ser Asp Met Gln Val Ser Phe Asp
185                 190                 195

His Ala Pro His Gly Ser Asp Met Gln Val Ser Phe Asp His Ala
            200                 205                 210

Pro His Asn Phe Gly Phe Arg Phe Phe Tyr Leu His Tyr Lys Leu
        215                 220                 225

Lys His Glu Gly Pro Phe Lys Arg Lys Thr Cys Lys Gln Glu Gln
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Thr Thr Glu Met Thr Ser Cys Leu Leu Gln Asn Val Ser Pro Gly
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Asp Tyr Ile Ile Glu Leu Val Asp Asp Thr Asn Thr Thr Arg Lys
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Val Met His Tyr Ala Leu Lys Pro Val His Ser Pro Trp Ala Gly
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Pro Ile Arg Ala Val Ala Ile Thr Val Pro Leu Val Val Ile Ser
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Ala Phe Ala Thr Leu Phe Thr Val Met Cys Arg Lys Lys Gln Gln
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Glu Asn Ile Tyr Ser His Leu Asp Glu Glu Ser Ser Glu Ser Ser
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Thr Tyr Thr Ala Ala Leu Pro Arg Glu Arg Leu Arg Pro Arg Pro
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Lys Val Phe Leu Cys Tyr Ser Ser Lys Asp Gly Gln Asn His Met
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Asn Val Val Gln Cys Phe Ala Tyr Phe Leu Gln Asp Phe Cys Gly
365 370 375

Cys Glu Val Ala Leu Asp Leu Trp Glu Asp Phe Ser Leu Cys Arg
380 385 390

Glu Gly Gln Arg Glu Trp Val Ile Gln Lys Ile His Glu Ser Gln
395 400 405

Phe Ile Ile Val Val Cys Ser Lys Gly Met Lys Tyr Phe Val Asp
410 415 420

Lys Lys Asn Tyr Lys His Lys Gly Gly Gly Arg Gly Ser Gly Lys
425 430 435

Gly Glu Leu Phe Leu Val Ala Val Ser Ala Ile Ala Glu Lys Leu
440 445 450

Arg Gln Ala Lys Gln Ser Ser Ser Ala Ala Leu Ser Lys Phe Ile
455 460 465

Ala Val Tyr Phe Asp Tyr Ser Cys Glu Gly Asp Val Pro Gly Ile
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Leu Asp Leu Ser Thr Lys Tyr Arg Leu Met Asp Asn Leu Pro Gln
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Leu Cys Ser His Leu His Ser Arg Asp His Gly Leu Gln Glu Pro
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Gly Gln His Thr Arg Gln Gly Ser Arg Arg Asn Tyr Phe Arg Ser
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Lys Ser Gly Arg Ser Leu Tyr Val Ala Ile Cys Asn Met His Gln
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Phe Ile Asp Glu Glu Pro Asp Trp Phe Glu Lys Gln Phe Val Pro
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Phe His Pro Pro Pro Leu Arg Tyr Arg Glu Pro Val Leu Glu Lys

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Phe Asp Ser Gly Leu Val Leu Asn Asp Val Met Cys Lys Pro Gly
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Pro Glu Ser Asp Phe Cys Leu Lys Val Glu Ala Ala Val Leu Gly
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Ala Thr Gly Pro Ala Asp Ser Gln His Glu Ser Gln His Gly Gly
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Leu Asp Gln Asp Gly Glu Ala Arg Pro Ala Leu Asp Gly Ser Ala
620 625 630

Ala Leu Gln Pro Leu Leu His Thr Val Lys Ala Gly Ser Pro Ser
635 640 645

Asp Met Pro Arg Asp Ser Gly Ile Tyr Asp Ser Ser Val Pro Ser
650 655 660

Ser Glu Leu Ser Leu Pro Leu Met Glu Gly Leu Ser Thr Asp Gln
665 670 675

Thr Glu Thr Ser Ser Leu Thr Glu Ser Val Ser Ser Ser Ser Gly
680 685 690

Leu Gly Glu Glu Glu Pro Pro Ala Leu Pro Ser Lys Leu Leu Ser
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Ser Gly Ser Cys Lys Ala Asp Leu Gly Cys Arg Ser Tyr Thr Asp
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